

Random Planar Graphs

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Abstract

The purpose of this talk is to discuss recent progress on asymptotic properties of random planar graphs, in particular on the degree distribution and on the maximum degree. For example it is shown that the limiting probability that a random vertex (in a random planar graph of size n) has degree k exists and can be explicitly computed. Furthermore, the maximum degree is asymptotically proportional to $\log n$.

These results are not motivated by 0-1 matrix theory but can be easily translated to corresponding result on (symmetric) random 0-1 matrices that represent planar graphs. Of course, the degree distribution corresponds to the distribution of the column sums and the maximum degree to the maximum column sum.

This is joint work with Omer Gimenez and Marc Noy (UPC Barcelona).